

ABSTRACT

Disclosed is a process for the upgrading and demetallizing of heavy oils and bitumens. A crude heavy oil and/or bitumen feed is supplied to a solvent extraction process 104 wherein DAO and asphaltenes are separated. The DAO is supplied to an FCC unit 106 having a low conversion activity catalyst for the removal of metals contained therein. The demetallized distillate fraction is supplied to a hydrotreater 110 for upgrading and collected as a synthetic crude product stream. The asphaltene fraction can be supplied to a gasifier 108 for the recovery of power, steam and hydrogen, which can be supplied to the hydrotreater 110 or otherwise within the process or exported. An optional coker 234 can be used to convert excess asphaltenes and/or decant oil to naphtha, distillate and gas oil, which can be supplied to the hydrotreater 220.